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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,014	08/18/2003	Ralph Anderson	KCX-723 (19746)	2961
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1731

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/643,014

Applicant(s)

ANDERSON ET AL.

Examiner

Anna Kinney

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) 36-46 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 36-46 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/20/04.
- 4) ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date 20050414.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1 through 35, drawn to a method for recycling broke that contains cellulosic fibers and a latex polymer, classified in class 162, subclass 4.
- II. Claims 36 through 46, drawn to a paper product comprising recycled broke that contains cellulosic fibers and a latex polymer, classified in class 162, subclass 191. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the process as claimed can be used to make a materially different product such as mulch.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.

During a telephone conversation with Jason Johnston (Reg. #45675) on April 15, 2005, a provisional election was made without traverse to prosecute the invention of a

method for recycling broke that contains cellulosic fibers and a latex polymer, claims 1 through 35. Affirmation of this election must be made by applicant in replying to this Office action. Claims 36 through 46 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

#### ***Information Disclosure Statement***

The information disclosure statement filed August 18, 2003 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. No copy of the article "Wt Strength Resins and Their Application" was provided. The Examiner has taken note of the applicant's indication that no legible complete copy is available.

#### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Item 20 in Figure 1. Corrected drawing sheets in compliance with 37 CFR

Art Unit: 1731

1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The disclosure is objected to because of the following informalities: On page 7, line 17, the phrase "and in some embodiments," is redundant and should be deleted; on page 12, line 10, the word "be" is missing at the end of the line in the phrase "may degraded"; on page 13, line 2, the "f" should be deleted from "and/for"; on page 20, line 21, "wash water" is missing an "h"; and on page 24, line 24, "products" is missing an "s". Page 9, line 4 cites U.S. Patent 6,120,640, Lindsay et al. However, this patent number does not match the inventor name cited, nor does it match the topic. The Examiner suggests that the correct patent number may be 6,228,216 or 6,610,173. Page 11, line 14 cites U.S. Patent 5,011,911, which has been withdrawn. The Examiner suspects that the applicant intended to cite U.S. Patent 5,011,091 to Kopecky. The Examiner suggests the applicant review the disclosure for further errors.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 through 35 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: Claims 1 and 27 are directed to recycling broke; however, the claims are incomplete. There is no step of recycling the fiber aggregates. It is not clear to where the broke is recycled. Claims 2 through 26 and 28 through 35 are dependent upon claims 1 and 35, respectively. Therefore, they are also subject to the same rejection.

Claims 21 through 25 and 35 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: In claims 21 and 35, a step of forming a paper product is not positively recited. Claims 22 through 25 depend from claim 21, and therefore are also subject to this rejection.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 21 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Brooks et al (U.S. Patent

Art Unit: 1731

5,277,758) in view of Webster's Dictionary (Webster's Third New International® Dictionary, Unabridged, 1993, Merriam-Webster, Incorporated) and Clark et al (U.S. Patent 3,250,666).

With respect to claim 1, Brooks et al discloses a method for recycling broke (col. 1, lines 15 to 20 and 25 to 30) containing cellulosic fibers and a latex polymer (col. 1, lines 23 to 28), said method comprising mechanically treating the broke (col. 6, lines 1 to 9) to form fiber aggregates (col. 6, lines 20 to 25), wherein said fiber aggregates have an average size of less than  $\frac{1}{2}$  an inch (col. 8, lines 30 to 34), or about the claimed 12 millimeters, and wherein a first portion of said fiber aggregates are coated with said latex polymer (col. 8, lines 14 to 15) and a second portion of said fiber aggregates remain relatively free from said latex polymer (col. 8, lines 15 to 16).

Brooks et al does not disclose expressly that the polyethylene is a latex polymer, or that the second portion of said fiber aggregates are relatively free from said latex polymer.

Webster's Dictionary defines latex as any of various emulsions in water of a synthetic rubber or plastic obtained by polymerization and used chiefly in paint and other coatings (as for paper) and adhesives. The Examiner has interpreted "latex polymer" to mean either a polymer in an emulsion or a polymer remaining after water has been removed from a latex emulsion. Brooks et al provides no indication that the polyethylene coating could not have existed as a latex emulsion prior to coating paper. The Examiner is considering the polyethylene coating of the reference to be equivalent to the latex polymer of the claim.

Clark et al discloses the use of a polyethylene latex in a method of forming cellulosic paper.

Although Brooks et al does not discuss the amount of polymer coating the two portions of fiber aggregates, the patent does describe the first portion as having less than 10 weight % paper, and the second portion as having greater than 10 weight % paper. In other words, the second portion has more fiber relative to fiber than does the first portion. Therefore, the second portion is relatively free of polymer in comparison to the first portion.

With respect to claim 21, Brooks discloses using said fiber aggregates to form a paper product (col. 1, lines 31 to 35).

Brooks et al and Clark et al are analogous art because they are from the same field of endeavor, that of processing polymer-coated paper.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the polyethylene of Clark et al in the latex polymer of Brooks et al to obtain the invention as specified in claim 1, because polyethylene solids can be made uniformly white and interfere little with the optical properties of the final paper product (Clark et al, col. 1, lines 40 to 42).

Claims 9 and 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brooks et al in view of Webster's Dictionary and Clark et al as applied to claim 1, above, and further in view of Danforth (U.S. Patent 4,365,761).

With respect to claim 9, Brooks, Webster's and Clark do not disclose expressly that the mechanical treatment comprises pulping said broke in a pulper.



Art Unit: 1731

Danforth discloses that the mechanical treatment comprises pulping said broke (col. 2, lines 40 to 42) in a pulper (Fig. 5, item 20).

With respect to claim 12, Brooks, Webster's and Clark do not disclose expressly that the pulper is a rotor/stator type pulper.

Danforth et al discloses that the pulper is a rotor/stator type pulper (col. 1, lines 13 to 17).

With respect to claim 13, Brooks, Webster's and Clark do not disclose expressly that the mechanical treatment further comprises refining said broke.

Danforth et al discloses that the mechanical treatment further comprises refining (col. 5, lines 61 to 65) said broke.

Brooks et al, Clark et al, and Danforth are analogous art because they are directed to a similar problem solving area, that of reclaiming coated paper.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to apply a rotor/stator type pulper and further refining as described by Danforth to the recycling of polyethylene latex-coated broke of Brooks et al and Clark et al to obtain the invention as specified in claims 9, 12, and 13. The motivation for doing so would have been because this pulper enables processing of difficult to defiber stock (col. 1, lines 22 to 26); and because the pulper produces a defibered condition suitable for introduction to refiners (col. 5, lines 61 to 65).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brooks et al in view of Webster's Dictionary, Clark et al, and Danforth ('761) as applied to claim 9, above, and further in view of Danforth (U.S. Patent 6,302,342).

With respect to 10, Danforth '761 does not disclose expressly that the broke is diluted to a solids consistency of from about 4% to about 10% prior to said pulping.

Danforth ('342) discloses that the broke is diluted to a solids consistency of 5% (col. 4, line 49), which is one specific point within the claimed range of from about 4% to about 10%, prior to said pulping.

Brooks et al, Clark et al, Danforth ('761) and Danforth ('342) are analogous art because they are directed to a similar problem solving area, that of reclaiming coated paper.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to apply a solids consistency of 5% as described by Danforth ('342) prior to pulping to obtain the invention as specified in claim 10. The motivation for doing so would have been that at this consistency, a 2,600 gallon tank (a typical capacity) can hold 1,000 pounds of stock (col. 4, lines 46 to 50).

***Allowable Subject Matter***

Claim 27 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Claims 2 through 8, 11, 14 through 20, 22 through 26, and 28 through 35 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: the primary reason for allowance of the claims is the inclusion of specific characteristics of the fiber-polymer aggregates.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 3,245,868 shows recovery of paper broke containing a wet strength resin, in which the broke is shredded and then delivered to a pulper. U.S. Patent 4,445,972 shows the recycling of old latex-based papers, using an agitator which produces agglomerates. U.S. Patent 4,510,019 shows recycling of latex containing broke. EP Patent 0 412 833 A2 shows a rotor and stator pulper. U.S. Patent 4,997,523 shows recycling of latex-coated broke. U.S. Patent 5,011,091 shows a rotating and stationary disk cellulose fiberization apparatus with a clearance between the discs of 0.005" to 0.060". U.S. Patent 5,133,833 shows a process for repulping fiber-latex binder composites. U.S. Patent 5,203,966 shows a method for conditioning baled wastepaper in recycling operations, including latex-containing broke.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anna Kinney whose telephone number is (571) 272-8388. The examiner can normally be reached on Monday through Friday.

Art Unit: 1731

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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STEVEN P. GRIFFIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700